

We Claim:

1 1. A method for use in a system where data is transmitted during
2 a handoff, the handoff having at least two legs each being between a
3 terminal and one of at least two sets of communication equipment, the
4 method comprising the steps of:

5 responsive to a deterioration in at least one of the characteristics of
6 a communication link that is part of at least one of the legs, changing at
7 least one parameter of the data; and

8 transmitting a burst of data over just one of the legs using the at
9 least one parameter.

10 2. The method of claim 1, wherein the at least one parameter is
11 selected to allow the data to be received at an acceptable level of signal
12 quality.

13 3. The method of claim 1, wherein the characteristics of the
14 communication link comprise the current characteristics of the
15 communication link.

16 4. The method of claim 1, wherein the characteristics of the
17 communication link comprise the stability of the communication link.

18 5. The method of claim 1, wherein the at least one parameter
19 comprises the maximum allowed burst duration.

20 6. The method of claim 5, wherein the transmitting step
21 comprises:

3 establishing a secondary channel over just one leg responsive to the
4 maximum allowed burst duration being at least as large as a threshold
5 burst duration; and

6 transmitting the data burst over the secondary channel.

1 7. The method of claim 6, further comprising the step of
2 responsive to the maximum allowed burst duration being smaller than the
3 threshold burst duration transmitting the data burst over the primary
4 channel.

5 8. The method of claim 1, wherein:
6 each set of communication equipment includes a transmitter; and
7 the communication link is a forward link.

8 9. The method of claim 1, wherein the characteristics of the
9 communication link are obtained from a pilot strength measurement
10 message.

1 10. The method of claim 1, wherein the characteristics of the
2 communication link are based on characteristics of at least one pilot
3 signal, each of the sets of the communication equipment transmitting one
4 of the at least one pilot signals.

1 11. The method of claim 10, wherein the characteristics of the at
2 least one pilot signal comprise whether an anchor set of the sets of
3 communication equipment remains as the anchor set.

1 12. The method of claim 10, wherein the characteristics of at least
2 one pilot signal comprise a strength of a pilot signal of an anchor set of

the sets of communication equipment for a first predetermined number of measurements.

13. The method of claim 1, wherein the characteristics of the communication link are based on at least one of the following characteristics:

whether an anchor set of the sets of communication equipment remains as the anchor set;

a strength of a pilot signal of an anchor set of the sets of communication equipment for a first predetermined number of measurements;

the strength of the pilot signal of the anchor set of the sets of communication equipment relative to a strength of a pilot signal of a non-anchor set of the sets of communication equipment;

the rate of change of the strength of the pilot signal of the anchor set of the sets of communication equipment; and

the rate of change of the strength of the pilot signal of the anchor set of the sets of communication equipment for a second predetermined number of measurements.

14. The method of claim 1, wherein the characteristics of the communication link are based on characteristics of a signal on a secondary channel.

15. A method for use in a system where a burst of data is transmitted during a handoff, the handoff having at least two legs each being between a terminal and one of at least two sets of communication equipment, the method comprising the steps of:

5 transmitting a first burst of data over just one of the legs using a
6 first plurality of burst parameters;

7 responsive to a deterioration in at least one of the characteristics of
8 a communication link that is part of at least one of the legs, selecting a
9 second plurality of burst parameters where at least one of the parameters
10 of the second plurality is different from the first plurality of burst
11 parameters; and

12 transmitting a second burst of data over just one of the legs using
13 the second set of burst parameters.

14 16. The method of claim 15, wherein the second plurality of burst
15 parameters is selected to allow the data to be received at an acceptable
16 level of signal quality.

17 17. The method of claim 15, wherein the characteristics of the
18 communication link comprise the current characteristics of the
19 communication link.

20 18. The method of claim 15, wherein the characteristics of the
21 communication link comprise the stability of the communication link.

22 19. The method of claim 15, wherein the at least one of the
23 parameters comprises the maximum allowed burst duration.

24 20. The method of claim 19, wherein the step of transmitting a
25 second burst of data comprises:

26 establishing a secondary channel over just one leg responsive to the
27 maximum allowed burst duration being at least as large as a threshold
28 burst duration; and

6 transmitting the data burst over the secondary channel.

1 21. The method of claim 20, further comprising the steps of
2 responsive to the maximum allowed burst duration being smaller than the
3 threshold burst duration transmitting the data burst over the primary
4 channel.

1 22. The method of claim 15, wherein:
each set of communication equipment includes a transmitter; and
the communication link is a forward link.

23. The method of claim 15, wherein the characteristics of the
communication link are obtained from a pilot strength measurement
message.

24. The method of claim 15, wherein the characteristics of the
communication link are based on characteristics of at least one pilot
signal, each of the sets of the communication equipment transmitting one
of the at least one pilot signals.

1 25. The method of claim 24, wherein the characteristics of the at
2 least one pilot signal comprise whether an anchor set of the sets of
3 communication equipment remains as the anchor set.

1 26. The method of claim 24, wherein the characteristics of at least
2 one pilot signal comprise a strength of a pilot signal of an anchor set of
3 the sets of communication equipment for a first predetermined number of
4 measurements.

1 27. The method of claim 15, wherein the characteristics of the
2 communication link are based on at least one of the following
3 characteristics:

4 whether an anchor set of the sets of communication equipment
5 remains as the anchor set;

6 a strength of a pilot signal of an anchor set of the sets of
7 communication equipment for a first predetermined number of
8 measurements;

9 the strength of the pilot signal of the anchor set of the sets
10 communication equipment relative to a strength of a pilot signal of a non-
11 anchor set of the sets of communication equipment;

12 the rate of change of the strength of the pilot signal of the anchor set
13 of the sets of communication equipment; and

14 the rate of change of the strength of the pilot signal of the anchor set
15 of the sets of communication equipment for a second predetermined
16 number of measurements.

1 28. The method of claim 15, wherein the characteristics of the
2 communication link are based on characteristics of a signal on a
3 secondary channel.

1 29. A method for use in a system where a burst of data is
2 transmitted during a handoff, the handoff having at least two legs each
3 being between a terminal and one of at least two sets of communication
4 equipment, the method comprising the steps of:

5 determining a maximum allowed burst duration as a function of the
6 characteristics of a communication link that is part of at least one of the
7 legs;

8 transmitting the burst of data over just one of the legs, wherein the
9 burst of data has a duration of at most the maximum allowed burst
10 duration.

1 30. The method of claim 29, wherein the maximum allowed burst
2 duration is selected to allow the data to be received at an acceptable level
3 of signal quality.

31. The method of claim 29, wherein the characteristics of the
communication link comprise the current characteristics of the
communication link.

32. The method of claim 29, wherein the characteristics of the
communication link comprise the stability of the communication link.

33. The method of claim 32, wherein the transmitting step
comprises:

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3 establishing a secondary channel over just one leg responsive to the
4 maximum allowed burst duration being at least as large as a threshold
5 burst duration; and
6 transmitting the data burst over the secondary channel.

1 34. The method of claim 33, further comprising the step of
2 responsive to the maximum allowed burst duration being smaller than the
3 threshold burst duration transmitting the data burst over the primary
4 channel.

1 35. The method of claim 29, wherein:
2 each set of communication equipment includes a transmitter; and

the communication link is a forward link.

36. The method of claim 29, wherein the characteristics of the communication link are obtained from a pilot strength measurement message.

37. The method of claim 29, wherein the characteristics of the communication link are based on characteristics of at least one pilot signal, each of the sets of the communication equipment transmitting one of the at least one pilot signals.

38. The method of claim 37, wherein the characteristics of the at least one pilot signal comprise whether an anchor set of the sets of communication equipment remains as the anchor set.

39. The method of claim 37, wherein the characteristics of at least one pilot signal comprise a strength of a pilot signal of an anchor set of the sets of communication equipment for a first predetermined number of measurements.

40. The method of claim 29, wherein the characteristics of the communication link are based on at least one of the following characteristics:

whether an anchor set of the sets of communication equipment remains as the anchor set;

a strength of a pilot signal of an anchor set of the sets of communication equipment for a first predetermined number of measurements;

9 the strength of the pilot signal of the anchor set of the sets
10 communication equipment relative to a strength of a pilot signal of a non-
11 anchor set of the sets of communication equipment;

12 the rate of change of the strength of the pilot signal of the anchor set
13 of the sets of communication equipment; and

14 the rate of change of the strength of the pilot signal of the anchor set
15 of the sets of communication equipment for a second predetermined
16 number of measurements.

41. The method of claim 29, wherein the characteristics of the
communication link are based on characteristics of a signal on a
secondary channel.

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